

# Anti-ROCK1 Antibody

## ER40122



<b>Product Type:</b>	Rabbit polyclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	WB, IHC-P
<b>Molecular Wt:</b>	Predicted band size: 158 kDa

**Description:** ROCK1 is a protein serine/threonine kinase also known as rho-associated, coiled-coil-containing protein kinase 1. ROCK1 has a ubiquitous tissue distribution, but subcellularly it is thought to colocalize with the centrosomes. This is consistent with its function as a key modulator of cell motility, tumor cell invasion, and actin cytoskeleton organization. ROCK1 has a diverse range of functions in the body. It is a key regulator of actin-myosin contraction, stability, and cell polarity. These contribute to many progresses such as regulation of morphology, gene transcription, proliferation, differentiation, apoptosis and oncogenic transformation. Other functions involve smooth muscle contraction, actin cytoskeleton organization, stress fiber and focal adhesion formation, neurite retraction, cell adhesion and motility. These functions are activated by phosphorylation of DAPK3, GFAP, LIMK1, LIMK2, MYL9/MLC2, PFN1 and PPP1R12A.

**Immunogen:** Synthetic peptide within residues of ROCK1 aa 1,305-1,354 / 1,354.

**Positive control:** A431 cell lysate, Human lung tissue lysate, Mouse spleen tissue lysate, C6 cell lysate, L6 cell lysate, HAP1 cell lysate, human colon cancer tissue, rat brain tissue.

**Subcellular location:** Cytoplasm, cell membrane, Nucleus, Cell projection, Cytoskeleton, Golgi apparatus, Membrane.

**Database links:** SwissProt: Q13464 Human | P70335 Mouse | Q63644 Rat

**Recommended Dilutions:**

<b>WB</b>	1:1,000-1:2,000
<b>IHC-P</b>	1:200

**Storage Buffer:** 1\*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

**Purity:** Immunogen affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

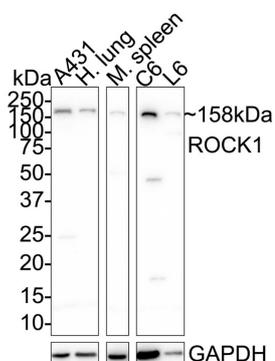
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## Images

**Fig1:** Western blot analysis of ROCK1 on different lysates with Rabbit anti-ROCK1 antibody (ER40122) at 1/1,000 dilution.

Lane 1: A431 cell lysate  
 Lane 2: Human lung tissue lysate  
 Lane 3: Mouse spleen tissue lysate  
 Lane 4: C6 cell lysate  
 Lane 5: L6 cell lysate



Lysates/proteins at 20 µg/Lane.

Predicted band size: 158 kDa  
 Observed band size: 158 kDa

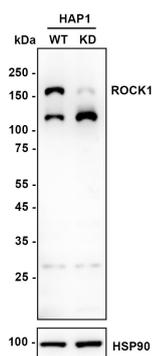
Exposure time: 3 minutes;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDm/TBST for 1 hour at room temperature. The primary antibody (ER40122) at 1/1,000 dilution was used in 5% NFDm/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

**Fig2:** Western blot analysis of ROCK1 on different lysates with Rabbit anti-ROCK1 antibody (ER40122) at 1/2,000 dilution.

Lane 1: HAP1-parental cell lysate  
 Lane 2: HAP1-ROCK1 KD cell lysate



Lysates/proteins at 10 µg/Lane.

Predicted band size: 158 kDa  
 Observed band size: 158 kDa

Exposure time: 30 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDm/TBST for 1 hour at room temperature. The primary antibody (ER40122) at 1/2,000 dilution was used in K1803 at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

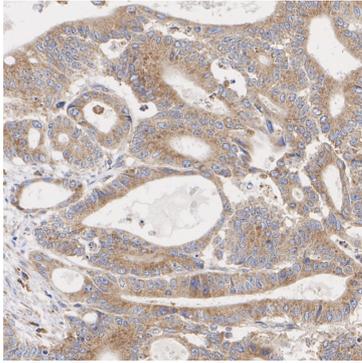
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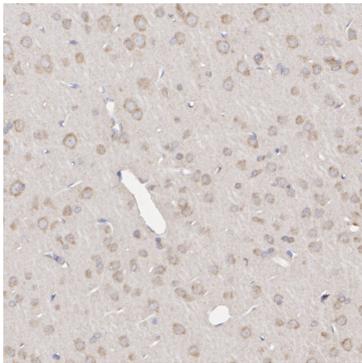
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**Fig3:** Immunohistochemical analysis of paraffin-embedded human colon cancer tissue with Rabbit anti-ROCK1 antibody (ER40122) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (ER40122) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



**Fig4:** Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-ROCK1 antibody (ER40122) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (ER40122) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

### Background References

1. "Identification of ROCK1 as an upstream activator of the JIP-3 to JNK signaling axis in response to UVB damage." Ongusaha P.P., Qi H.H., Raj L., Kim Y.B., Aaronson S.A., Davis R.J., Shi Y., Liao J.K., Lee S.W. *Sci. Signal.* 1:RA14-RA14(2008)
2. "Distinct roles for ROCK1 and ROCK2 in the regulation of keratinocyte differentiation." Lock F.E., Hotchin N.A. *PLoS ONE* 4:E8190-E8190(2009)

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